Ì	Million 15. Carl	· IG.
	DRAFTSHAIL 514	SUBCLASS 252

$$G_{2} = G_{3}$$

$$G_{1} \longrightarrow G_{4}$$

$$(R_{1})_{m} \longrightarrow G_{4}$$

$$R_{2} \longrightarrow R_{3} \longrightarrow R_{6} \longrightarrow R_{7}$$

$$R_{1} \longrightarrow R_{2} \longrightarrow R_{3} \longrightarrow R_{8} \longrightarrow R_{9}$$

$$R_{2} \longrightarrow R_{2} \longrightarrow R_{3} \longrightarrow R_{8} \longrightarrow R_{9}$$

$$R_{2} \longrightarrow R_{2} \longrightarrow R_{3} \longrightarrow R_{8} \longrightarrow R_{9}$$

$$R_{2} \longrightarrow R_{2} \longrightarrow R_{2} \longrightarrow R_{3} \longrightarrow R_{4} \longrightarrow R_{9}$$

$$R_{2} \longrightarrow R_{2} \longrightarrow R_{3} \longrightarrow R_{4} \longrightarrow R_{9} \longrightarrow R_{9} \longrightarrow R_{2} \longrightarrow R_{2}$$

1	n.G.FIG.		
1		SUBCLASS	
DRAFTSHAN	514	252	

FIG.2

	S 1	S 2	S 3
1 1	N	N - C-N N	OMe CO₂EI
1 2	r	$N \longrightarrow C-N \longrightarrow N$	o's s
1 3	N	$N \longrightarrow C \cdot N \longrightarrow N$	S S
1 4	N	$N \longrightarrow C-N \longrightarrow N$	NO ₂
1 5	v	N C-N N	o's Co
16	N	$N \longrightarrow C-N \longrightarrow N$	o o cı
17	N	$N \longrightarrow \overset{H^3}{\text{C-}} V$	S N
1 8	N	N C-N N	's° \
1 9	N	$N \longrightarrow C-N \longrightarrow N$	CO₂H S CI
2 0	N	N - C-N N	S CI CI CO₂H
2 1	N	N C-N N	S-NHCOCH3
2 2	N	N - C-N N	S NH ₂

APPROVAG	0.G. F	IG.
EY DRAFTSMAN	1 . /	SUBCLASS 252

	S 1	S 2	S 3
2 3	N	S_{0} $N \longrightarrow C_{H_{2}}$ N	os CI
2 4	N	N → C-N N	o'S-Br
2 5	N	N - C-N N	os-CI
2 6	N	N C-N N	è [°]
2 7	N	N C-N N	0S-CH3
2 8	N	$N \longrightarrow C-N$	o's-CN
2 9	N	N - C-N N	, о — — он
3 0	N	$N \longrightarrow C-N$	S F
3 1	N	CO ₂ EI N -C-N N	S-Co-cı
3 2	N	CH ₂ OH N -C-N N H ₂	s cı
3 3	N	N CO₂H N H₂ N	os———cı
3 4	N	COCH2CO2E1	os—CI

-	APPROVED	O.G. FIG.		
	ΒY	CLASS	SUBCLASS	
	DRAFTSMAN	514	252	

	v	FIG.4	
	S 1	S 2 CONH₂	S 3
3 5	N	N C-N N	o's CI
3 6	N	CONHCH₂CH N C·N N H₂	SCH ₂ CH ₃
3 7	N	COCH ₃ N −C-N N H ₂	os CI
3 8	N	CONMe ₂ N C-N N H ₂	°S-CI
3 9	N	CO ₂ Et	os CI
4 0	N	N CO ₂ H N C-N N H ₂ N	os-CI
4 1	N	CH ₂ OH N C-N N	°S-CI
4 2	N	CH ₂ OMe N C-N N H ₂ Y	os CI
4 3	N	CH ₂ OAc N-C-N N H ₂ O CO ₂ Et	os-CI
4 4	N	N C-N N	o ^S ————————————————————————————————————
4 5	N	N C-N N	o ^{\$0} cı
46.	N	CONH ₂ N C:N N	os-CI

٢	APPROVE	J.G.F	IG.	
	BY	CLASS	SUBCLASS	
1	ORAFTSMAH	514	252]

FIG.5

	S 1	S 2 _{CHNOH}	, S 3
4 7	N	N − C-N N	o ^S —CI
4 8	N	CO-N H ₂	os
4 9	N	CONMe ₂ N C-N N H ₂	os CI
5 0	N	CONHOME N C N N H ₂	è CI
5 1	N	V CO-N OH	os———cı
5 2	2	CH ₂ NH ₂	os-Co
5 3	N	CH ₂ -N O	o ^{\$}
5 4	N.	CH ₂ NMe ₂	°5-CI
5 5	N	CH ₂ NHAc N C-N N H ₂	os CI
5 6	N	CH ₂ NHSO ₂ Me N -C·N N H ₂ N	°S-C1
5 7	N	CH ₂ -N OH	o's CI
5 8	N	CH_2OH CH_2OH CH_2OH	`s ^o

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APPRÖVEU	0.G. F	1G
BY	CLASS	SUBCLASS
DRAFTSMAN		

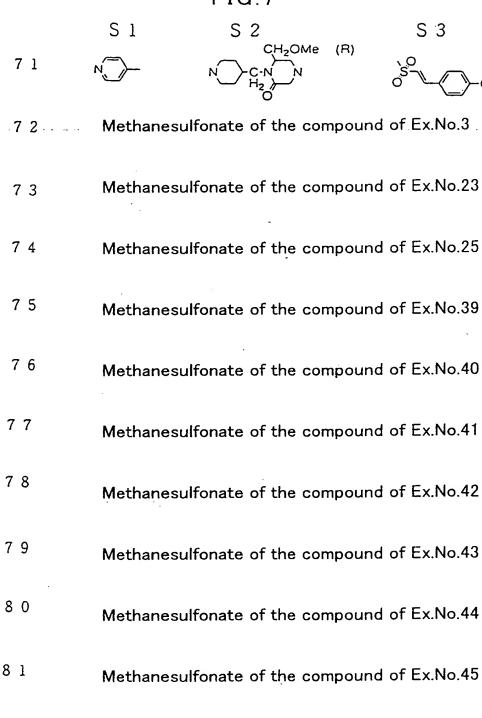
FIG.6

	S 1	S 2 _{CH₂OAc}	S 3
5 9	v	N C:N N	o's ^o
6 0	N	CO ₂ Et (R)	os-Co-cı
6 1	Z	CO_2EI (S) O	os-Co-cı
6 2	N	CH_2OMe (R) $N \longrightarrow C-N$ N H_2 N	òs-Cı
6 3	N	CH ₂ OMe (S)	os-Co-cı
6 4	N	CO ₂ H (R) N C-N N	s cı
6 5	N	CO ₂ nPr N -C-N N	os-CI
6 6	N	$CO_2^n Pr$ (R) $N \longrightarrow C-N$ N H_2 O	°S-CI
6 7	N	$V \longrightarrow C \cdot N \longrightarrow N$	os CI
6 8	Z	$CO_2^{i}Pr$ (R) $N \longrightarrow C-N$ N $H_2 \longrightarrow N$	· os-CI
6 9	N	OO_2 tBu OO_2 tBu OOO	oS-CI
7 0	N	N - C-N N	o's-CI

8 2

	u		
١	APPREVI:	0:G. FIG	
	BY		SUBCLASS
	ORAFTSMAH	514	252

FIG.7



Methanesulfonate of the compound of Ex.No.48

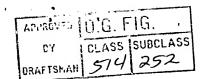


FIG.8 S 1 S 2

S 3

8 3	Methanesulfonate of the compound of Ex.No.52
84 -	Methanesulfonate of the compound of Ex.No.53
8 5	Methanesulfonate of the compound of Ex.No.54
8 6	Methanesulfonate of the compound of Ex.No.55
8 7	Methanesulfonate of the compound of Ex.No.56
8 8	Methanesulfonate of the compound of Ex.No.57
8 9	Methanesulfonate of the compound of Ex.No.60
9 0	Methanesulfonate of the compound of Ex.No.61
9 1	Methanesulfonate of the compound of Ex.No.62
9 2	Methanesulfonate of the compound of Ex.No.63
9 3	Methanesulfonate of the compound of Ex.No.64
9 4	Methanesulfonate of the compound of Ex No 66

APPROVED O.G. FIG.		
ΘY	CLASS	SUBCLASS
ORAFTSHAH	514	252

FIG.9 S 1 S 2 S 3

	S 1	S 2	S 3
9 5	Methan	esulfonate of the co	mpound of Ex.No.68
9 6	2	N C-N N H₂ N	s S F
9 7		$V \longrightarrow C-V \longrightarrow V$	\SCF3
9 8	N	N C-N N H ₂	о О О О О О О О О О О
9 9	N	0 N - C-N N H ₂	SONH₂
1 0 0	N	N C-N N	o's OH
1 0 1	N	0 N - C-N N H ₂	oS———Br
1 0 2	N	N - C-N N	S F
1 0 3	N	0 N C-N N H ₂	o's -
1 0 4	N	$N \longrightarrow C \cdot N \longrightarrow N$	oS
1 0 5	N	N C N N	OS CF3
106	N	N C N N	,s Оси

•	•		1.
	APPRÓVEU		
	ву	CLASS	SUBCLASS
	ORAFTSMAN	111	252

	S 1	S 2	S 3
1 0 7	N	S 2 NOC-NN	o ^S ———осн _з
1 0 8	N	N - C - N N	, о °S————————————————————————————————————
1 0 9	N	N C-N N	S-NH ₂
1 1 0	2	N C-N N	S NH ₂
1 1 1	N	0 N C-N N	S NH ₂
1 1 2	N	O N - C-N N H ₂	is Comment
1 1 3	N	N → C → N N	S Br
1 1 4	N	N − C-N N	o's Company
1 1 5	N	n → c·n n	S Br
1 1 6	N	H_2 O	S CI
1 1 7	N	N C-N N	S
1 1 8	N	N - C-N N	NH ₂
			1 77 12

APPRÜVEU		
3 1	111	SUBCLASS
DRAFTSHAH	517	252

		FIG.11	
	S 1	S 2	S 3
1 1 9	N	N C-N N	os Coh
1 2 0	N N	- N - C-N N	o'S Br
1 2 1	N	N C-N N	o'S-CI
1 2 2	N	N C-N N	o'S-N=-F
1 2 3	N	N C-N N	o's N=
1 2 4	N	N C-N N	s S
1 2 5	N	$ \begin{array}{c} O\\ -C-N\\ H_2 \end{array} $	os HN
1 2 6	N	N - C-N N	os NH
1 2 7	N	N C-N N	os CI
1 2 8	N	N - C-N N H ₂ O	o'S Br
1 2 9	N_	N → C-N N	o'S Br
1 3 0	N		0 S VO CI

,			l
APPROVED	0.G. F	1G	
CY	CLASS	SUBCLASS	١
DRAFTSMAN	514	252	١

		FIG.12	
	S 1	S2 _o	S 3
1 3 1	N	N C-N N	0,50 ———————————————————————————————————
1 3 2	N		OS Br
1 3 3	N	$V \longrightarrow C \cdot V \longrightarrow V$	o ^S —Cı
1 3 4	N	N C-N N	0°S
1 3 5	N	N - C-N N	oS Br
1 3 6	N N	CO ₂ EI N -C-N N	os———cı
1 3 7	N	CO ₂ Et	o ^S ———Br
1 3 8	N	CO ₂ Et	oS—Br
1 3 9	N	N − C-N N H ₂ N	NH₂ O CI
1 4 0	N	N − C-N N H ₂	o ^S ——Br
1 4 1	N	CO ₂ H N +2	o'S Br
1 4 2	N	$\begin{array}{c} CONHCH_2CH_2 \\ N \longrightarrow C \cdot N \\ H_2 \end{array}$	SCH ₂ CH _{3O} OS————CI

APPROVED	O.G. FIG.	
ВУ	CLASS	SUBCLASS
DRAFTSMAN	514	252

		114.10	·
	S 1	S 2 conhch₂ch₂s	S 3
1 4 3	N	N C-N N	o ³ ——Br
144	N	CONHCH2CH2S	SCH ₂ CH ₃ O Br
1 4 5	NH ₂	$N \longrightarrow C \cdot N \longrightarrow N$	o ^S ———cı
1 4 6	NH ₂	N - C-N N	os Br
147	NH ₂	N - C-N N	oS Br NH₂
1 4 8	NH ₂	N C-N N	o ^{\$0} cı
1 4 9	NH ₂	N C-N N	o ^S ——Br
1 5 0	NH ₂	N C-N N	S Br
1 5 1	NH ₂	N C-N N H ₂	o ^{\$0} ————————————————————————————————————
1 5 2	NH ₂	N C-N N H ₂	oS-Br
1 5 3	NH ₂	N C-N N	oS Br
154	NH ₂		05

,	APPROTER G.G. FIG.		
	γo	CLASS	SUBCLASS
	DRAFTSMAIL	514	252

		FIG.14	
155	S 1	S 2 N C-N N	S 3
156	NH ₂	0 0 0 0 N C-N N	os Br
157	NH ₂	0 V C-N H ₂	o ^{so} ———cı
158	NH ₂	N C-N N	o'S Br
1 5 9	NH ₂	N - C-N N	oS Br
1 6 0	NH ₂	CO₂Et H₂	o ^S ————————————————————————————————————
1 6 1	NH ₂	CO ₂ Et	o's Br
162	NH ₂	CO_2Et CO_2Et CO_2Et	OS—Br NH ₂
1 6 3	NH ₂	CO ₂ H N C-N N H ₂	o ^S ————————————————————————————————————
164	NH ₂	$V \longrightarrow C_2H$	o's Br
165	NH ₂	$ \begin{array}{c} CO_2H \\ N \longrightarrow C\cdot N \longrightarrow N \end{array} $	S Br
1 6 6	NH ₂	CONHCH2CH2S	CH₂CH₃O OS————CI

		·	
١	APPROVE-	O.G. FIG.	
	ВХ	CLASS	SUBCLASS
	DRAFTSMAN	514	252

		FIG.15	
	S 1	S 2	S 3
167	NH ₂	CONHCH2CH2SCH2C	o S Br
168	NH ₂	CONHCH2CH2SCH2C	H ₃ O Br
169	H ₂ N-	$N \longrightarrow C-N \longrightarrow N$	os cı
170	H ₂ N-	$N \longrightarrow C \cdot N \longrightarrow N$	o'S Br
171	H ₂ N-	$N \longrightarrow C \cdot N \longrightarrow N$	S− NH ₂
172	H ₂ N-	$ \begin{array}{c} O\\ O\\ H_2 \end{array} $	o ^S ————————————————————————————————————
173	H ₂ N-	$V \longrightarrow C - V \longrightarrow V$	o'S
174	H ₂ N-	N - C-N N	SO Br
175	H ₂ N-	N C-N N H₂ 0	os———cı
1. 7 6	H ₂ N-	N - C-N N O	o'S-Br
177	H ₂ N-	N - C - N N	S Br
1 7 8	H ₂ N-	O O O O O O O O O O O O O O O O O O O	o'S CI

APPROVED		
GY	CLASS	SUBCLASS
ORAFTSHAN	514	252

		FIG.16	
	S 1	S 2	S 3
1 7 9	H ₂ N-N	0 0 0 N H ₂	o'S-Br
1 8 0	H ₂ N-	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	S Br NH₂
181	H ₂ N-	0 N - C-N H ₂ N	o ^S ————cı
182	H _Z N-	N - C-N N H ₂	os Br
183	H ₂ N-	N C-N N	S Br
184	H ₂ N-N	CO_2Et CO_2Et CO_2Et	o ^{\$0} cı
185	H ₂ N-	$ \begin{array}{c} CO_2Et \\ N - C - N - N \\ H_2 \end{array} $	S Br
186	H ₂ N	CO ₂ Et N − C-N N H ₂	o's Br
187	H ₂ N-	CO ₂ H N - C-N N H ₂	OS NH₂
188	H ₂ N-	N - C-N N	os——Br
189	H ₂ N-N	CO ₂ H CONHCH ₂ CH	SCH ₂ CH ₃ NH ₂
1 9 0	H ₂ N	N - C-N N	O NH ₂

1	0.G. FIG. '.
7/8	CLASS SUBCLASS
DRAFTSMAN	574 252

		FIG.17	
	S 1	S 2	S 3
191	H ₂ N-N	CONHCH2CH2SCH2CH2CH2CH2CH2CH2CH2CH2CH2CH2CH2CH2CH2C	o'S-Br
192	H ₂ N	CONHCH2CH2SCH2C	CH ₃ S Br
1 9 3		N C-N N	os ————————————————————————————————————
1 9 4		$N \longrightarrow C-N \longrightarrow N$	o's Br
1 9 5		$N \longrightarrow C-N \longrightarrow N$	S Br
196		N − C − N − N	os————cı
197		O N—C-N H ₂	o'S Br
198		N → C.·N N	S-Br
199	\bigcirc	N C-N N H ₂	o ^{\$0} ————————————————————————————————————
2 0 0	\bigcirc	N → C-N N H ₂	os Br
201		N C·N N	OS Br
2 0 2	\bigcirc	N - C-N N	0 ^S -CI

APPROVID	APPROVED O.G. FI	
EY	CI.ASS	SUBCLASS
DRAFTSMAN	514	252

		FIG.18	·
	S 1	S 2	S 3
2 0 3	\bigcirc	N - C-N N	o ^S ——Br
2 0 4	\bigcirc	N - C-N N	oS———Br
2 0 5		N C:N N	o ^{SO} ———cı
2 0 6		N C-N N	o'S Br
2 0 7	_	N C-N N	S-Br NH ₂
2 0 8	\bigcirc	CO ₂ Et	o ^{SO} ———cı
2 0 9	<u></u>	CO ₂ Et	S Br
2 1 0		CO ₂ Et	OS
2 1 1	\bigcirc	CO ₂ H N	os CI
2 1 2	\bigcirc	$N \longrightarrow C \cdot N \longrightarrow N$	os Br
2 1 3		$ \begin{array}{c} CO_2H \\ N \longrightarrow C-N \longrightarrow N \\ H_2 \end{array} $	oS Br
2 1 4	\bigcirc	$\begin{array}{c} CONHCH_2CH_2 \\ N - C \cdot N N \\ H_2 \end{array}$	SCH ₂ CH _O OS CI

-	APPROVED	O.G. F.IG.		
	CΥ	CLASS	SUBCLASS	
	DRAFTSMAN	514	252	·

		FIG.19	
	S 1	S 2	S 3
2 1 5		CONHCH ₂ CH ₂ S N C·N N	OS Br
2 1 6		CONHCH ₂ CH ₂ S N C-N N	SCH ₂ CH ₃ S Br
2 1 7	но-{	$N \longrightarrow C \cdot N \longrightarrow N$	o ^{\$-}
2 1 8	но-{	N C N N	os——Br
2 1 9	но-{{}	N - C-N N	OS Br NH₂
2 2 0	но-{	0 N - C-N N	o ^{SO} ————————————————————————————————————
2 2 1	но-{>-	N - C-N N	os ——Br
2 2 2	но-{->-	N C-N N	S − Br
2 2 3	но-{	N C-N N	o ^S cı
2 2 4	но-{-}-	N C-N N	oS Br
2 2 5	но-(N C-N N	S Br
2 2 6	но-{-}-	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	°S

APPROVED D.C. FIG.		IG.
70	CLASS	SUBCLASS
DRAFTSMAN	514	252

		FIG.20	
	S 1	S 2	S 3
2 2 7	но-{-}-	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	o's Br
2 2 8	но-(N C-N N	S Br NH₂
2 2 9	но-	N C-N N	os ———cı
2 3 0	но-{}	N C:N N	o'S Br
2 3 1	но-{	$N \longrightarrow C \cdot N \longrightarrow N$	OS Br
2 3 2	но-{-}-	$\begin{array}{c} CO_2Et \\ N \longrightarrow C-N N \end{array}$	o ^{\$0} ———cı
2 3 3	но-{	CO ₂ E1	o's Br
2 3 4	но-{->-	CO₂Et N C-N N H₂	OS Br
2 3 5	но-{->-	CO ₂ H N -C-N N H ₂	o ^S ———CI
2 3 6	но-{	$\begin{array}{c} CO_2H \\ N - C-N N \end{array}$	os Br
2 3 7	но-{}	$ \begin{array}{c} CO_2H \\ N - C-N N \end{array} $	S Br
2 3 8	но-(CONHCH2CH2 N-C-N-N H2	SCH ₂ CH ₂ O O CI

APPĢOVTU	O.G. FIG.	
EY	CLASS	SUBCLASS
DRAFTSHALL	514	252

		FIG.21	
	S 1.	S 2	S 3
2 3 9	но-{-}-	S 2 CONHCH2CH2 N C-N N H2	
2 4 0	но-{-}-	CONHCH2CH2 N C-N N H2	SCH ₂ CH ₃ S Br
2 4 1	HOH ₂ C-	$N \longrightarrow C-N \longrightarrow N$	o ^S ———cı
2 4 2	нон₂с-⟨¯¯⟩	N - C-N N	o'S'
2 4 3	HOH₂C-(¯)	$N \longrightarrow C-N \longrightarrow N$	SO Br NH₂
2 4 4	HOH ₂ C-	N − C-N N	o's CI
2 4 5	нон₂с-⟨¯у	N - C-N N	os Br
2 4 6	HOH ₂ C-	$ \begin{array}{c} O \\ O \\ H_2 \end{array} $	S Br NH₂
2 4 7	нон₂С-{_}	N - C-N N H ₂	o ^{SO} —CI
2 4 8	нон₂с-⟨¯¯⟩-	N − C - N N O	oS—Br
2 4 9	нон₂с-⟨¯¯⟩	N → C · N N	oS Br
2 5 0	нон₂С	N C N N	o ^S ————————————————————————————————————

GZVORSSA	O.G. FIG.	
CY	CLASS	SUBCLASS
DRAFTSMAN	514	252

		FIG.22	
	S 1	S 2	S 3
2 5 1	нон₂с-⟨¯у	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	o'S Br
2 5 2	нон₂с-{_}	O O O O O O O O O O O O O O O O O O O	S Br
2 5 3	HOH₂C-	N C:N N	o ^S —CI
2 5 4	нон₂с-⟨¯⟩	N C-N N	os Br
2 5 5	нон₂с-⟨¯⟩	$ \begin{array}{c} 0\\ C \cdot N\\ H_2 \end{array} $	S-Br
2 5 6	нон₂с-	$ \begin{array}{c} CO_2Et \\ N - C-N N \\ H_2 \end{array} $	o ^S ———cı
257	HOH₂C-(¯¯)	CO ₂ Et	o Br
2 5 8	HOH₂C-{\bigcirc}-	CO ₂ Et	OS Br
2 5 9	HOH₂C-{\bigcirc}	$V \longrightarrow C_2H$ $V \longrightarrow C_1$ $V \longrightarrow C_2$ $V \longrightarrow C_2$	o ^S ————cı
260	HOH₂C-⟨¯¯⟩-	$ \begin{array}{c} CO_2H \\ N - C-N \\ H_2 \end{array} $	o'S ——Br
2 6 1	HOH ₂ C-√	$V \longrightarrow C - V \longrightarrow V$	SO Br
2 6 2	HOH₂C-(¯¯)	CONHCH2CH2SCH	o CI

APPRAVED	0:G. FIG.	
BY	CLASS	SUBCLASS
DRAFTSMAR	514	252

	6.1	FIG.23	C 2
2 6 3	S 1 нон₂с-{_}_	S 2 conhch₂ch₂: N - C-N N H₂	o ³ √ }_Br
2 6 4	нон₂с	CONHCH2CH2:	SCH ₂ CH ₃ S Br
2 6 5	H ₂ NOC-⟨¯¯⟩	N	o ^{SO} cı
2 6 6	H ₂ NOC-√	N C-N N	os Br
267	H ₂ NOC-√	$N \longrightarrow C-N \longrightarrow N$	OS Br
2 6 8	H ₂ NOC-⟨¯¯⟩	O N C-N N H ₂	0 S-CI
2 6 9	H ₂ NOC-	0 N C-N N H ₂	o'S Br
270	H ₂ NOC-⟨¯¯⟩	N C-N N	oS Br
271	H₂NOC-⟨¯⟩	N C-N N	o ^S ———cı
272	H ₂ NOC-	0 H ₂ N	o'S Br
273	H ₂ NOC-⟨¯¯		S Br
274	H ₂ NOC-	$V \longrightarrow C \cdot N \longrightarrow N$	°S

-	APPROVED	O.G. FIG		•
	ÜΥ	CLASS	SUBCLASS	
	DRAFTSMAN	514	252	ŀ

		FIG.24	
2 7 5	S 1 H₂NOC-⟨¯>	S 2 0 0 N C-N N	S 3
276	H ₂ NOC	O O O O O O O O O O O O O O O O O O O	S Br
277	H₂NOC-{\bigs_}	N C-N N	°S————cı
278	H ₂ NOC-⟨¯¯	$N \longrightarrow C \cdot N \longrightarrow N$	o'S Br
2 7 9	H₂NOC-⟨¯¯	$N \longrightarrow C-N \atop H_2 \longrightarrow N$	S Br
2 8 0	H ₂ NOC-√	CO ₂ EI	o ^S cı
2 8 1	H ₂ NOC-	$ \begin{array}{c} CO_2Et \\ C-N \\ H_2 \end{array} $	o'S Br
282	H₂NOC-	CO ₂ Et	S Br
283	H ₂ NOC-	$ \begin{array}{c} CO_2H \\ N - C-N - N \end{array} $	°, SO
2 8 4	H ₂ NOC-√	$V \longrightarrow C - V \longrightarrow V$	o'S-Br
2 8 5	H ₂ NOC-√	$ \begin{array}{c} CO_2H \\ C\cdot N \\ H_2 \end{array} $	S Br
2 8 6	H ₂ NOC-√	CONHCH2C N C·N N H2	CH ₂ SCH ₂ CH ₃

AFPRCVES	o.g. FIG.	
ey	CLASS	SUBCLASS
DRAFTSMAN	514	252

	S 1	S 2 CONHCH2CH2SCH2CH3	S 3
2 8 7	H ₂ NOC-	14 \C.14 14	o'S Br
2 8 8	H ₂ NOC-	CONHCH ₂ CH ₂ SCH ₂ CH ₃	OS Br
2 8 9	H ₂ N	N C-N N)\$ ⁰ CI
2 9 0	H ₂ N	N - C-N N	o Br
291	H ₂ N	$N \longrightarrow C \cdot N \longrightarrow N$	oS Br
2 9 2	H ₂ N	N C:N N	°\$
2 9 3	H ₂ N	0 N C-N N	oS-Br
2 9 4	H ₂ N	N C-N N	S Br
2 9 5	H ₂ N	N - C-N N H ₂	oS—CI
2 9 6	H ₂ N		s - Br
2 9 7	H ₂ N	$V \longrightarrow C - N \longrightarrow N$	S-Br
2 9 8	H ₂ N		°S CI

ſ	APPROVE	O'G. F	IG.
١	EY	CLASS	SUBCLASS
	DRAFTSMAH	1/	252

		FIG.26	
	S 1	S 2	S 3
2 9 9	H ₂ N	N C-N N	o'S Br
3 0 0	H ₂ N	N C-N N	S Br
3 0 1	H ₂ N	N C-N N	o ^{SO} —CI
3 0 2	H ₂ N	N C-N N	o'S———Br
3 0 3	H ₂ N	N C-N N	S Br
3 0 4	H ₂ N	CO ₂ Et N - C-N N H ₂	os CI
3 0 5	H ₂ N	CO_2E1	S——Br
3 0 6	H ₂ N	CO ₂ Et N-C-N-N	oS Br
3 0 7	H ₂ N	CO ₂ H N -C-N N H ₂	°S-V-CI
3 0 8	H ₂ N	CO ₂ H N C-N N H ₂	o's Br
3 0 9	H ₂ N	$ \begin{array}{c} CO_2H \\ N \longrightarrow C \cdot N \longrightarrow N \end{array} $	S Br
3 1 0	H ₂ N	CONHCH2CH N-C-NN H2	OS—CI

[APPŘOVED	O.G. FIG.	
١	CY	CLASS	SUBCLASS
	ORAFTSMAN	514	252

		FIG.27	
. •	S 1	S 2 CONHCHZCI	S 3
3 1 1	H ₂ N	N - C-N N	0
3 1 2	H ₂ N	CONHCH ₂ CI	H ₂ SCH ₂ CH ₃ S Br
3 1 3	H ₂ NH ₂ C	N - C-N N	o ^S ————————————————————————————————————
3 1 4	H ₂ NH ₂ C	N C-N N	o ^S ——Br
3 1 5	H ₂ NH ₂ C	N C-N N	OS Br
3 1 6	H _z NH _z C	0 H ₂ O	o\$ ⁰
3 1 7	H ₂ NH ₂ C	N C-N N	os Br
3 1 8	H₂NH₂C	N C-N N	OS Br
3 1 9	H ₂ NH ₂ C	N − C-N N O	o'S
3 2 0	H₂NH₂C	N C-N N H₂ O	o'S
3 2 1	H ₂ NH ₂ C	N C-N N H ₂	oS -Br
3 2 2	H ₂ NH ₂ C	O O O O H ₂	°S

		1
APPROVED	0.G. F	FIG.
BY	CLASS	SUBCLASS
DRAFTSMAN	514	252

		FIG.28	
	S 1	S 2	S 3
3 2 3	H ₂ NH ₂ C	$N \longrightarrow H_3$ $O \longrightarrow O$ $O \longrightarrow O$	o ^S -Br
3 2 4	H ₂ NH ₂ C	0 0 N C-N N	S Br
3 2 5	H ₂ NH ₂ C	N - C-N N	0\$ ^O CI
3 2 6	H ₂ NH ₂ C	0 N C-N N H ₂	os Br
3 2 7	H ₂ NH ₂ C	N C-N N H ₂ N	S Br
3 2 8	H ₂ NH ₂ C	CO ₂ Et	o ^{\$0} cı
3 2 9	H ₂ NH ₂ C	CO ₂ Et N—C-N H ₂	s Br
3 3 0	H ₂ NH ₂ C	CO_2Et $C-N$ H_2	OS Br
3 3 1	H ₂ NH ₂ C	CO ₂ H N - C-N N	oscı
3 3 2	H ₂ NH ₂ C	$N \longrightarrow \begin{matrix} CO_2H \\ C\cdot N \\ H_2 \end{matrix}$	o ^S —Br
3 3 3	H ₂ NH ₂ C	CO ₂ H N − C-N N	oS Br
3 3 4	H ₂ NH ₂ C	CONHCH ₂ C	CI

APPROVED	O:G. FIG.	
9Y	CLASS	SUBCLASS
DRAFTSMAN	514	252

		FIG.29	
	S 1	S 2	S 3
3 3 5	H ₂ NH ₂ C	CONHCH2CH2SCH2CH3	oS Br
3 3 6	H ₂ NH ₂ C	CONHCH2CH2SCH2CH3	OS Br
3 3 7	H ₂ NOC	$N \longrightarrow C-N \longrightarrow N$	o ^{\$0} cı
3 3 8	H ₂ NOC	N C-N N	s ^O —Br
3 3 9	H ₂ NOC	$N \longrightarrow C-N \longrightarrow N$	S Br
3 4 0	H ₂ NOC	N C-N N	o ^{\$0}
3 4 1	H ₂ NOC	N - C-N N	o's Br
3 4 2	H ₂ NOC	N - C-N N	ONH ₂
3 4 3	H ₂ NOC	N C-N N	o ^S ———cı
3 4 4	H ₂ NOC	N C-N N H ₂	os Br
3 4 5	H ₂ NOC	N - C-N N	OS Br
3 4 6	H ₂ NOC	O O O N N H ₂	oscı

APPROVID	o.G. FIG.	
ΕA	CLASS	SUBCLASS
DRAFTSMAN	514	252

		FIG.30	
3 4 7	S 1 H₂NOC	$S 2$ $N \longrightarrow C - N N$	S 3
3 4 8	H ₂ NOC	O O O O O O O O O O O O O O O O O O O	OS Br
3 4 9	H₂NOC	N C-N N	o's CI
3 5 0	H₂NOC	N C N N	o'S Br
3 5 1	H ₂ NOC	N C-N N	S Br
3 5 2	H ₂ NOC	CO_2Et $C-N$ H_2	°S
3 5 3	H ₂ NOC	CO ₂ EI	os———Br
3 5 4	H₂NOC	N CO₂E1	S Br NH₂
3 5 5	H ₂ NOC	N − C-N N	os————————————————————————————————————
3 5 6	H ₂ NOC	$ \begin{array}{c} CO_2H \\ N - C-N \\ H_2 \end{array} $	o'S Br
3 5 7	H ₂ NOC	$V \longrightarrow C \cdot V V$	oS Br NH₂
3 5 8	H ₂ NOC	CONHCH2CH2S	SCH ₂ CH ₃ O OS — CI

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Ì	APPROVED	0:G. F	IG.	
	ΒY	CLASS	SUBCLASS	
	DRAFTSMAN		252	Ì

		FIG.31	
	S 1	S 2	S 3
3 5 9	H₂NOC	CONHCH2CH N C-N N	OS
3 6 0	H ₂ NOC	CONHCH2CH	SSCH ₂ CH ₃ SO Br
. 3 6 1	N_N	N C-N N	o ^S ————————————————————————————————————
3 6 2	N_N	N C-N N	o's Br
3 6 3	N_N	$N \longrightarrow C \cdot N \longrightarrow N$	S Br
3 6 4	N_N	N ← C-N N	o ^S CI
3 6 5	N_N_	N C-N N	os——Br
3 6 6	N_N	N C-N N	S Br
3 6 7	N	N - C-N N	os
3 6 8	N_N	N C-N N	o'S———Br
3 6 9	N	N C-N N	oS-Br
3 7 0	N=N	O O O N H ₂ N	o ^S CI

APPROVED		O.G. FIG.		
	BY	CLASS	SUBCLASS	
	DRAFTSMAIL	3/4	132	

	0.1	FIG.32	
3 7 1	S 1	$\begin{array}{c} S & 2 \\ \\ \searrow \\ C \cdot N \\ H_2 \end{array}$	S 3
3 7 2	N	O O O O H ₂	o'S'——Br
3 7 3	N_N	N - C-N N	o ^S cı
3 7 4	N_N	N C-N N	o ^S ——Br
3 7 5	N N	N - C-N N H ₂	os Br NH₂
3 7 6	N	CO ₂ Et	os CI
3 7 7	N=N	CO ₂ Et	o's Br
3 7 8	N	CO₂Et N -C-N N H₂	OS Br
3 7 9	N=N	CO ₂ H N - C-N N H ₂	o\$
3 8 0	N_N	$ \begin{array}{c} CO_2H \\ \\ C-N \\ H_2 \end{array} $	os Br
3 8 1	N_N	$N \longrightarrow C \longrightarrow N \longrightarrow N$	oS-Br
	N	CONHCH2CH2	SCH ₂ CH ₃ O S \ \ O
3 8 2	N=14	$N \longrightarrow C \cdot N \longrightarrow N$	o ^S ~~~~~~Cı

		<u></u>	
APPROVED-	O.G. FIG.		
6 Y	CLASS	SUBCLASS	
DRAFTSMAN	514	252	

		FIG.33	
	S 1	S 2 conhch2ch2s	S 3
3 8 3	N	AL CAL AL	
3 8 4	N_N	$\begin{array}{c} \begin{array}{ccccccccccccccccccccccccccccccccc$	SCH ₂ CH ₃ SO Br
3 8 5	N_N	N - C-N N	o ^{\$0} ————cı
3 8 6	N N	$N \longrightarrow C - N \longrightarrow N$	o'S Br
3 8 7	N_N_	N - C-N N	OS Br
3 8 8	N_N	0 H ₂ N	o ^S ——CI
3 8 9	N_N	N - C-N N	o'S'—Br
3 9 0	N_N	N - C-N N	OS————Br NH ₂
3 9 1	N_N	N C-N N	o ^S ———cı
3 9 2	N N	N C-N N	o's Br
3 9 3	N_N	N C+N N	SO Br
3 9 4	N	0 0 N C:N N	o's CI

4 0 5

4 0 6

· ĺ	APPROVIU	n.g. FIG.	
	ρy		SUBCLASS
	DRAFTSMAN	2-11/	252

		FIG.34	
3 9 5	S 1	N C:N N	S 3
3 9 6	N_N	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	oS Br
3 9 7	N	N C-N N	o ^S ——CI
3 9 8	N_N	N C-N N H ₂ N	o'S-Br
3 9 9	N N	0 N -C·N H ₂	S Br
4 0 0	N N	$\begin{array}{c} CO_2Et \\ N \\ -C-N \\ H_2 \end{array}$	oscı
4 0 1	N N	$ \begin{array}{c} CO_2Et \\ N \longrightarrow C-N \longrightarrow N \end{array} $	os——Br
4 0 2	N N	CO ₂ Et	S Br
4 0 3	N N	CO ₂ H N° - C · N N	o ^S ———cı
4 0 4	N_N	CO ₂ H N - C-N N H ₂	os Br

-	APPROVED	0.G. F	IG.,
	BY	CLASS	SUBCLASS
	DRAFTSHAN	564	252

	S 1	S 2	S 3
4 0 7	N	CONHCH2CH2SCH N-C-NN H2	
408	N >-N	CONHCH2CH2SCI	H ₂ CH ₃ S Br
4 0 9	0N	N	os CI
4 1 0	0	$N \longrightarrow C-N \longrightarrow N$	S Br
411	0-1	N - C-N N	o NH ₂
412	0-N	0 V—C-N H ₂	os CI
4 1 3	0-1-	N → C-N N	oS Br
4 1 4	0-N	N - C-N N	OS Br
4 1 5	0-N	0 V C-N N H₂ 0	0 ^S
416	0-N	N C-N N	os Br
417	0-1	0 N - C-N N H ₂ O	oS Br
4 1 8	0-N	N - C - N N	°S

AFPROVEU	O.G. F	IG.	
СY	CLASS	SUBCLASS	•
DRAFTSMAN	514	252	

		FIG.36	
4 1 9	S 1	S 2 N C:N N	S 3
4 2 0	0N	N C-N N	S Br
421	0-N	N - C-N N	os————cı
4 2 2	0-N	N - C - N N	o'S Br
423	0-1-	0 V C-N H ₂	os Br
4 2 4	0-1-1-	CO ₂ EI N C-N N	°S————————————————————————————————————
4 2 5	0-N	CO ₂ Et	o's Br
4 2 6	0-4-	$V \longrightarrow C - V \longrightarrow V$	o'S Br
427	0-1-0-	$ \begin{array}{c} CO_2H \\ C-N \\ H_2 \end{array} $	0'S
4 2 8	0-1	N - C-N N H ₂	o'S'———Br
4 2 9	0-1	$ \begin{array}{c} CO_2H \\ N \\ H_2 \end{array} $	o'S-Br
4 3 0	0-1	CONHCH2CH2S N C-N N H2	SCH ₂ CH ₃ , O

	O.G. FIG.	
8Y	CLASS	SUBCLASS
RAFTSMAN	514	252

		FIG.37	
	S 1	S 2	S 3
4 3 1	0-1	CONHCH2CH2SC N-C-NN H2	H ₂ CH ₃ S
432	0-N	CONHCH2CH2SC	H ₂ CH ₃ S Br
4 3 3	N	N (CH ₂) ₂ -N N	o ^{\$0} ————————————————————————————————————
434	N	N (CH ₂) ₂ -N N	o'S-Br
4 3 5	N	$N \longrightarrow -(CH_2)_2-N \longrightarrow N$	OS Br
4 3 6	N	N (CH ₂) ₃ -N N	oS—CI
437	N	N (CH ₂) ₃ -N N	oS—Br
4 3 8	2	$N \longrightarrow -(CH_2)_3-N \bigcirc N$	S-Br NH ₂
439	N.	0 N - C-N N H ₂	Br
4 4 O	N	N - C-N N	Br NH ₂
4 4 1	N	N - C-N N	Br
4 4 2	N	N	Br NH ₂

AFPROVED O.G. FIG.

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DRAFTSMAN

	S 1	FIG.38 S 2	S 3
4 4 3	N	N	s = NH
444	N	N - C-N N	S-NH ₂
4 4 5	N	N - C-N N	NH₂ S O Br
4 4 6	N	N → C-N N	oS Br
4 4 7	N N	N C-N N	è S
448	N	N → C-N N	S Br
4 4 9	H ₂ N− HO−	N	os——Br
4 5 0	H ₂ N—	N - C-N N	S Br
4 5 1	H ₂ N—	N C-N N	o'S'——Br
4 5 2	H ₂ N————————————————————————————————————	N -C-N N	S-Br NH ₂
4 5 3	H ₂ N-	CO ₂ H N C-N N	o'S Br
454	H ₂ N-	$ \begin{array}{c} CO_2H \\ N \longrightarrow C \cdot N \longrightarrow N \end{array} $	S Br

APPROVED	0.G. FIG.		
6Y	CLASS	SUBCLASS	ľ
DRAFTSMAH	514	252	

		FIG.39	
	S 1	S 2	S 3
4 5 5	H ₂ N—	CONHCH2CH	SCH ₂ CH ₃ O Br
4 5 6	H ₂ N—	CONHCH2CH CONHCH2CH	2SCH2CH3
4 5 7	N	CH ₂ Ph	, O , S —
4 5 8	N	CH ₂ Ph NC-NN	o'\$ ^O ——Br
4 5 9	N	N C-N N	S Br
4 6 0	N	0=\N_N \ H_2 \ N	S NH₂ OS CI
461	N	0 = N $0 = N$	os Br
462	N	$0 \longrightarrow N$ $N \longrightarrow C \cdot N$ H_2	S-Br NH ₂
4 6 3	N	N -C-N N	
4 6 4	- N	N - C-N N	`s - __\
4 6 5	N	N C N N	`\$_\\$_\N=\
4 6 6	Z	$V \longrightarrow C \cdot V \longrightarrow V$	

APPRIOVED O.G. FIG. .

BY CLASS SUBCLASS

DRAFTSHAIN 514 252

	FIG.40
Ex.No.	NMR (ppm)
	(*:300MHz,Without asterisk:270MHz)
	DMSO-d6*: 8. 20-8. 10 (2H, m), 7. 81 (2H, d, J=9Hz), 7. 51
1	(2H, d, J=9Hz), 7.46-7.30 (2H, m), 6.90-6.75 (2H, m)
	3. 65-3. 55 (2H, m), 3. 43-3. 18 (4H, m), 2. 75-2. 62 (2H,
	m), 2.61-2.44 (4H, m), 2.44-2.31 (1H, m), 1.90-1.80
	(2H, m), 1.58-1.40 (2H, m)
	DMSO-d6*:8.17-8.11 (2H, m), 7.81 (2H, d, J=9Hz), 7.52
2	(2H, d, J=9Hz), 7.44-7.29 (2H, m), 6.83-6.77 (2H, m)
	3. 63-3. 52 (2H, m), 3. 31-3. 20 (4H, m), 2. 72-2. 58 (2H,
	m), 2.47-2.37 (4H, m), 2.17 (2H, d, J=7Hz), 1.86-1.75
	(2H, m), 1.70-1.55 (1H, m), 1.25-1.05 (2H, m) CDCI3*:8.26-8.17 (2H, m), 7.47-7.37 (5H, m), 6.73-
3	6. 62 (3H, m), 3. 93-3. 80 (2H, m), 3. 30-3. 16 (4H, m),
	112. 89-2. 75 (2H, m), 2. 60-2. 47 (4H, m), 2. 24 (2H, d,
	J=7Hz), 1.89-1.65 (3H, m), 1.30-1.13 (2H, m)
	CDC13:8.36-8.32 (1H, m), 8.20-8.11 (2H, m), 8.04-7.92
4	(3H, m), 7.76 (1H, dd, J=2, 9Hz), 7.72-7.60 (2H, m),
j	6. 69-6. 62 (2H, m), 3. 93-3. 82 (2H, m), 3. 16-3. 04 (4H,
	m). 2. 98-2. 78 (2H, m). 2. 55-2. 44 (4H, m). 2. 19 (2H.
	<u>d, J=7Hz), 1.86-1.63 (3H, m), 1.29-1.04 (2H, m)</u> CDCl3:8.32-8.29 (1H, m), 8.22-8.16 (2H, m), 8.01-7.86
l	(3H, m), 7.77 (1H, dd, J=2, 9Hz), 7.58 (1H, dd, J=2,
5	9Hz), 6.73-6.65 (2H, m), 3.97-3.84 (2H, m), 3.16-2.88
1	(6H, m), 2.56-2.43 (4H, m), 2.19 (2H, d, J=7Hz),
	1, 90-1, 67 (3H, m), 1, 25-1, 06 (2H, m)
	CDC13:8.32-8.28 (1H, m), 8.23-8.18 (2H, m), 8.11 (1H,
	d, J=2Hz), 7.90 (1H, d, J=9Hz), 7.85 (1H, d, J=9Hz),
	7. 78 (1H, dd, J=2, 9Hz), 7. 71 (1H, dd, J=2, 9Hz),
	6. 62-6. 57 (2H. m). 3. 88-3. 74 (2H. m). 3. 18-2. 99 (4H.
	n), 2.88-2.70 (2H, m), 2.59-2.42 (4H, m), 2.18 (2H,
	d, J=7Hz), 1.81-1.57 (3H, m), 1.35-1.04 (2H, m)
	d, J=7Hz), 1.81-1.57 (3H, m), 1.35-1.04 (2H, m) CDCI3*:8.22-8.16 (2H, m), 7.95-7.86 (2H, m), 7.80
	(1H, s), 7.56-7.46 (2H, m), 6.75-6.68 (2H, m), 4.00-
	3.92 (2H, m), 3.25-3.13 (4H, m), 3.06-2.95 (2H, m),
	2.60-2.50 (4H, m), 2.23 (2H, d, J=7Hz), 1.93-1.72
	(3H m) 1,28-1,10 (2H m)
C	MSO-d6:8.21 (1H, dd, J=5, 8Hz), 8.14-8.08 (2H, m),
٤	3.04 (1H, s), 7.94-7.87 (1H, m), 7.51 (1H, dt, J=3,
9	0Hz), 6.91-6.83 (2H, m), 4.03-3.87 (2H, m), 3.14-2.97
8	(4H. m). 2.95-2.78 (2H. m). 2.57-2.49 (4H. m).
2	1. 15 (2H, d, J=7Hz), 1.85-1.62 (3H, m), 1.12-0.93
	(2H, m)
	DC13*:8.25-8.17 (2H, m), 7.90-7.80 (2H, m), 7.76
	1H, s), 7.48-7.42 (1H, m), 6.67-6.59 (2H, m), 3.90-
	. 78 (2H, m), 3. 23-3. 11 (4H, m), 2. 85-2. 74 (2H, m),
	.60-2.48 (4H, m), 2.21 (2H, d, J=7Hz), 1.85-1.53
	3H, m), 1.30-1.09 (2H, m)
	DCl3*:8.24-8.11 (2H, m), 7.95 (1H, s), 7.49-7.36
11.7	2H, m), 6.87-6.66 (3H, m), 4.06-3.90 (5H, m), 3.25-
2	. 95 (6H, m), 2.61-2.40 (4H, m), 2.22 (2H, d, J=7Hz),
1	<u>. 95-1, 72 (3H, m) 1, 33-1, 07 (2H, m) </u>

AFPROVED O.G. FIG.

BY CLASS SUBCLASS

DRAFTSMAN 574 252

-	NMR (ppm)
Ex.No.	(*:300MHz,Without asterisk:270MHz)
11	CDC13*:8.24-8.18 (2H, m), 7.77 (1H, d, J=9Hz), 7.71 (1H, s), 7.29 (1H, d, J=2Hz), 7.09 (1H, dd, J=2, 9Hz), 6.65-6.59 (2H, m), 3.91 (3H, s), 3.89-3.78 (2H, m), 3.24-3.06 (4H, m), 2.85-2.72 (2H, m), 2.58-2.44 (4H, m), 2.21 (2H, d, J=7Hz), 1.85-1.56 (3H, m), 1.35-1.08 (2H, m)
12	CDC13:8.23-8.15 (2H, m), 7.90-7.76 (2H, m), 7.56-7.45 (2H, m), 6.67-6.60 (2H, m), 4.33 (2H, s), 4.18 (2H, q, J=7Hz), 3.90-3.80 (2H, m), 3.32-3.20 (4H, m), 2.90-2.76 (2H, m), 2.57-2.45 (4H, m), 2.20 (2H, d, J=7Hz), 1.85-1.62 (3H, m), 1.30-1.10 (2H, m), 1.26 (3H, t, J=7Hz)
13	CDC13*:8.25-8.17 (2H, m), 8.14-8.07 (1H, m), 7.93-7.86 (1H, m), 7.62-7.53 (2H, m), 6.71-6.63 (2H, m), 3.95-3.84 (2H, m), 3.47-3.35 (4H, m), 2.94-2.80 (2H, m), 2.60-2.49 (4H, m), 2.24 (2H, d, J=7Hz), 1.91-1.67 (3H, m), 1.35-1.12 (2H, m)
14	CDC13:8.48-8.40 (1H, m), 8.38-8.17 (2H, m), 7.60-7.22 (3H, m), 6.74-6.64 (2H, m), 4.00-3.85 (2H, m), 3.60-3.44 (4H, m), 2.98-2.82 (2H, m), 2.75-2.61 (4H, m), 2.31 (2H, d, J=7Hz), 1.97-1.50 (3H, m), 1.40-1.16 (2H, m)
15	CDCI3:8.25-8.14 (2H, m), 7.75-7.66 (1H, m), 7.61-7.33 (4H, m), 6.77-6.66 (2H, m), 4.00-3.88 (2H, m), 3.38-3.23 (4H, m), 3.05-2.90 (2H, m), 2.59-2.42 (4H, m), 2.22 (2H, d, J=7Hz), 1.93-1.71 (3H, m), 1.31-1.10 (2H, m)
16	CDCI3:8.21-8.16 (2H, m), 7.68 (1H, d, J=2Hz), 7.51 (1H, d, J=9Hz), 7.44 (1H, dd, J=2, 9Hz), 7.31 (1H, s), 6.69-6.62 (2H, m), 3.95-3.85 (2H, m), 3.35-3.25 (4H, m), 2.93-2.80 (2H, m), 2.55-2.47 (4H, m), 2.22 (2H, d, J=7Hz), 1.90-1.60 (3H, m), 1.35-1.10 (2H, m)
	CDCl3:8.31-8.13 (3H, m), 8.07 (1H, d, J=9Hz), 7.82 (1H, dd, J=2, 9Hz), 6.66-6.53 (2H, m), 3.88-3.71 (2H, m), 3.14-2.96 (4H, m), 2.92 (3H, s), 2.85-2.68 (2H, m), 2.61-2.39 (4H, m), 2.19 (2H, d, J=7Hz), 1.90-1.55 (3H, m), 1.31-1.03 (2H, m)
18	CDCl3:8.25-8.18 (2H, m), 7.83 (2H, d, J=9Hz), 7.74 (2H, d, J=9Hz), 7.66-7.58 (2H, m), 7.56-7.40 (3H, m), 6.65-6.57 (2H, m), 3.88-3.76 (2H, m), 3.16-3.02 (4H, m), 2.86-2.71 (2H, m), 2.60-2.47 (4H, m), 2.21 (2H, d, J=7Hz), 1.85-1.59 (3H, m), 1.30-1.08 (2H, m)
19	CDCI3+CD30D:8.64-8.55 (1H, m), 8.36-7.97 (3H, m), 7.47 (1H, d, J=8Hz), 6.85-6.59 (2H, m), 4.03-3.86 (2H, m), 3.38-3.13 (4H, m), 3.07-2.87 (2H, m), 2.58-2.06 (6H, m), 1.94-1.68 (3H, m), 1.37-1.07 (2H, m)

APPROVED J.C. FIG. .

BY CLASS SUBCLASS

DRAFTSMAN 514 252

	FIG.42
Ex.No.	NMR (ppm)
20	(*:300MHz,Without asterisk:270MHz) CDC13:8.25-8.18 (2H, m), 7.87-7.85 (1H, m), 7.55-7.44 (2H, m), 6.70-6.65 (2H, m), 3.98-3.86 (2H, m), 3.67 (2H, s), 3.25-3.16 (4H, m), 3.03-2.90 (2H, m), 2.50-2.41 (4H, m), 2.20-2.15 (2H, m), 2.05-1.80 (3H, m), 1.30-1.10 (2H, m)
	CDC 13:8.31 (1H, s), 8.20-8.10 (2H, m), 8.03 (1H, d,
21	J=9Hz), 7.95-7.82 (2H, m), 7.78-7.70 (1H, m), 7.68-7.58 (1H, m), 6.62-6.57 (2H, m), 3.89-3.78 (2H, m), 3.15-2.98 (4H, m), 2.88-2.73 (2H, m), 2.56-2.44 (4H, m), 2.37 (3H, s), 2.18 (2H, d, J=7Hz), 1.80-1.60 (3H, m), 1.28-1.05 (2H, m)
22	CDC13*:8.28-8.13 (3H, m), 7.96 (1H, d, J=9Hz), 7.73-7.64 (1H, m), 7.47-7.37 (2H, m), 6.96-6.90 (1H, m), 6.63-6.54 (2H, m), 4.40-4:10 (1H, m), 3.90-3.74 (2H, m), 3.16-2.97 (4H, m), 2.83-2.68 (2H, m), 2.58-2.40 (4H, m), 2.17 (2H, d, J=7Hz), 1.80-1.60 (3H, m), 1.22-1.02 (2H, m)
23	CDC13:8.28-8.20 (2H, m), 7.49 (1H, d, J=16Hz), 7.48-7.38 (4H, m), 6.69-6.58 (3H, m), 3.89 (2H, s), 3.94-3.78 (2H, m), 3.57-3.44 (4H, m), 3.32 (2H, d, J=7Hz), 2.88-2.72 (2H, m), 2.05-1.87 (1H, m), 1.83-1.64 (2H, m), 1.40-1.22 (2H, m)
	CDCI3*:8.37-8.34 (1H, m), 8.26-8.19 (2H, m), 8.16-8.11 (1H, m), 7.93 (1H, d, J=9Hz), 7.88 (1H, d, J=9Hz), 7.80 (1H, dd, J=2, 9Hz), 7.75 (1H, dd, J=2, 9Hz), 6.66-6.59 (2H, m), 3.89-3.77 (2H, m), 3.80 (2H, s), 3.49-3.38 (4H, m), 3.25 (2H, d, J=7Hz), 2.84-2.72 (2H, m), 1.99-1.83 (1H, m), 1.68-1.57 (2H, m), 1.35-1.17 (2H, m)
25	CDCI3:8.29 (1H, s), 8.20-8.11 (2H, m), 7.91-7.83 (3H, m), 7.73 (1H, dd, J=2, 9Hz), 7.55 (1H, dd, J=2, 9Hz), 6.57-6.50 (2H, m), 3.78-3.68 (4H, m), 3.40-3.30 (4H, m), 3.17 (2H, d, J=8Hz), 2.74-2.60 (2H, m), 1.90-1.70 (1H, m), 1.60-1.48 (2H, m), 1.28-1.07 (2H, m)
26	CDCl3*:8.41-7.93 (6H, m), 7.86-7.64 (3H, m), 6.75-6.52 (2H, m), 3.88-3.77 (4H, m), 3.48-3.38 (4H, m), 3.24 (2H, d, J=8Hz), 2.85-2.71 (2H, m), 1.99-1.84 (1H, m), 1.68-1.58 (2H, m), 1.34-1.17 (2H, m)
27	CDC13*:8.35-8.32 (1H, m), 8.26-8.19 (2H, m), 7.94-7.88 (2H, m), 7.77-7.70 (2H, m), 7.54-7.48 (1H, m), 6.65-6.58 (2H, m), 3.86-3.76 (4H, m), 3.48-3.37 (4H, m), 3.27-3.21 (2H, m), 2.83-2.70 (2H, m), 2.59 (3H, s), 1.97-1.81 (1H, m), 1.66-1.56 (2H, m), 1.29-1.16 (2H, m)
28	CDC13*:8.45-8.43 (1H, m), 8.37-8.34 (1H, m), 8.26-8.21 (2H, m), 8.14-8.09 (2H, m), 7.94-7.88 (1H, m), 7.84-7.79 (1H, m), 6.65-6.60 (2H, m), 3.92-3.79 (4H, m), 3.54-3.40 (4H, m), 3.30-3.24 (2H, m), 2.88-2.75 (2H, m), 2.00-1.50 (3H, m), 1.37-1.16 (2H, m)

APPROVED O.G. FIG.

BY CLASS SUBCLASS

DRAFTSMAN 574 252

	FIG.43
Ex.No.	NMR (ppm) (*:300MHz,Without asterisk:270MHz)
29	CDC13*:8.30-8.24 (1H, m), 8.13-8.05 (2H, m), 7.92-7.86 (1H, m), 7.84-7.78 (1H, m), 7.72-7.65 (1H, m), 7.32-7.20 (2H, m), 6.70-6.61 (2H, m), 3.93-3.74 (4H, m), 3.49-3.36 (4H, m), 3.28-3.19 (2H, m), 2.85-2.61 (2H, m), 1.96-1.82 (1H, m), 1.60-1.50 (2H, m), 1.35-1.10 (2H, m)
30	CDC13*:8.26-8.16 (3H, m), 7.98-7.92 (1H, m), 7.86-7.66 (4H, m), 6.69-6.64 (2H, m), 3.97-3.83 (4H, m), 3.67-3.58 (2H, m), 3.55-3.44 (2H, m), 3.34-3.26 (2H, m), 2.94-2.80 (2H, m), 2.08-1.88 (1H, m), 1.76-1.64 (2H, m), 1.38-1.19 (2H, m)
31	CDC13*:8.31 (1H, s), 8.26-8.15 (2H, m), 7.98-7.88 (3H, m), 7.80-7.74 (1H, m), 7.63-7.56 (1H, m), 6.63-6.56 (2H, m), 4.25-4.10 (2H, m), 3.85-3.76 (2H, m), 3.63-3.52 (1H, m), 3.37-3.18 (3H, m), 3.07-2.99 (1H, m), 2.94-2.84 (1H, m), 2.82-2.70 (2H, m), 2.62-2.46 (2H, m), 2.37-2.27 (1H, m), 1.80-1.54 (3H, m), 1.34-1.23 (3H, m), 1.20-1.03 (2H, m)
32	CDC13:8.31 (1H, s), 8.20-8.16 (2H, m), 7.97-7.88 (3H, m), 7.80-7.74 (1H, m), 7.62-7.55 (1H, m), 6.68-6.62 (2H, m), 3.95-3.79 (3H, m), 3.66-3.55 (1H, m), 3.36-3.30 (2H, m), 3.06-2.78 (5H, m), 2.65-2.40 (3H, m), 2.25-2.14 (1H, m), 1.89-1.70 (3H, m), 1.30-1.10 (2H, m)
33	DMSO-d6:8.51 (1H, s), 8.34-8.02 (5H, m), 7.87-7.68 (2H, m), 6.82-6.68 (2H, m), 3.95-3.74 (2H, m), 3.57-2.20 (11H, m), 1.78-1.52 (3H, m), 1.07-0.82 (2H, m)
34	CDC13*:8.37-8.27 (1H, m), 8.26-8.15 (2H, m), 8.00-7.92 (3H, m), 7.81-7.71 (1H, m), 7.64-7.53 (1H, m), 6.66-6.53 (2H, m), 4.26-4.10 (2H, m), 3.90-3.34 (5H, m), 3.33-1.94 (10H, m), 1.90-1.57 (3H, m), 1.35-0.94 (5H, m)
35	CDC13:8.32 (1H, s), 8.28-8.17 (2H, m), 8.00-7.89 (3H, m), 7.85-7.75 (1H, m), 7.67-7.57 (1H, m), 6.65-6.56 (2H, m), 6.33-6.25 (1H, m), 5.39-5.32 (1H, m), 3.91-3.75 (2H, m), 3.75-3.65 (1H, m), 3.65-3.52 (1H, m), 3.14-2.99 (2H, m), 2.87-2.62 (4H, m), 2.46-2.31 (2H, m), 2.29-2.16 (1H, m), 1.91-1.53 (3H, m), 1.32-1.04 (2H, m)
36	CDC13*:8.34-8.29 (1H, m), 8.24-8.18 (2H, m), 7.98-7.90 (3H, m), 7.81-7.75 (1H, m), 7.63-7.56 (1H, m), 6.73-6.66 (1H, m), 6.64-6.34 (2H, m), 3.94-3.79 (2H, m), 3.77-3.69 (1H, m), 3.66-3.56 (1H, m), 3.51-3.31 (2H, m), 3.14-2.98 (2H, m), 2.88-2.55 (6H, m), 2.47-2.29 (4H, m), 2.22-2.13 (1H, m), 1.92-1.61 (3H, m), 1.40-1.09 (5H, m)
37	CDC13*:8.38-8.14 (3H, m), 8.00-7.84 (3H, m), 7.81-7.69 (1H, m), 7.64-7.54 (1H, m), 6.66-6.51 (2H, m), 3.89-3.24 (2H, m), 3.38-2.92 (6H, m), 2.84-2.67 (2H, m), 2.50-2.11 (3H, m), 2.18 (3H, s), 1.89-1.56 (3H, n), 1.36-1.00 (2H, m)

APPROVED O.G. FIG.

EY CLASS SUBCLASS

DRAFTSMAN 514 252

	FIG.44
Ex.No	NMR (ppm)
	(*:300MHz,Without asterisk:270MHz) CDC13:8.29 (1H, s), 8.31-8.03 (2H, m), 8.03-7.82 (3H,
38	m), 7.82-7.69 (1H, m), 7.57 (1H, dd, J=2, 9Hz), 6.74 (6.50 (2H, m), 3.95-3.75 (2H, m), 3.65 (2H, d, J=11Hz), 3.60-3.43 (1H, m), 3.28-2.40 (6H, m), 3.15 (3H, s), 2.94 (3H, s), 2.26 (1H, dd, J=9, 12Hz), 2.12-1.97 (1H, m), 1.87 (1H, d, J=13Hz), 1.80-1.55 (2H, m), 1.35-1.02 (2H, m)
39	CDC13:8.34 (1H, s), 8.25-8.18 (2H, m), 7.98-7.90 (3H, m), 7.77 (1H, dd, J=2, 9Hz), 7.64-7.58 (1H, m), 6.64-6.57 (2H, m), 4.38-4.04 (5H, m), 3.96-3.75 (3H, m), 3.46 (1H, d, J=17Hz), 3.07-2.96 (1H, m), 2.88-2.68 (2H, m), 2.66-2.55 (1H, m), 1.93-1.75 (1H, m), 1.73-1.55 (2H, m), 1.32 (3H, t, J=7Hz), 1.32-1.14 (2H, m)
40	CD30D*:8.47 (1H, s), 8.16-7.99 (5H, m), 7.90-7.83 (1H, m), 7.64 (1H, dd, J=2, 9Hz), 7.02 (2H, d, J=8Hz), 4.18-3.91 (5H, m), 3.81 (1H, dd, J=8, 14Hz), 3.58 (1H, d, J=16Hz), 3.30-3.20 (1H, m), 3.12-2.93 (2H, m), 2.72 (1H, dd, J=7, 14Hz), 2.08-1.92 (1H, m), 1.82-1.71 (1H, m), 1.62-1.52 (1H, m), 1.31-1.04 (2H, m)
41	CDC13:8.36 (1H, s), 8.21 (2H, d, J=7Hz), 8.00-7.90 (3H, m), 7.84-7.76 (1H, m), 7.62 (1H, dd, J=2, 9Hz), 6.58 (2H, d, J=7Hz), 4.28-4.12 (2H, m), 3.95-3.72 (5H, m), 3.48-3.35 (2H, m), 2.84-2.63 (4H, m), 2.05-1.46 (3H, m), 1.34-1.13 (2H, m)
42	CDC13*:8.36 (1H, s), 8.26-8.19 (2H, m), 7.98-7.92 (3H, m), 7.80 (1H, dd, J=2, 9Hz), 7.61 (1H, dd, J=2, 9Hz), 6.62-6.55 (2H, m), 4.17 (1H, d, J=17Hz), 4.05 (1H, d, J=12Hz), 3.94-3.70 (3H, m), 3.70-3.43 (3H, m), 3.38 (3H, s), 3.38 (1H, d, J=17Hz),
	2.88-2.66 (4H, m), 2.08-1.90 (1H, m), 1.71-1.54 (2H, m), 1.38-1.07 (2H, m)
43	CDC13:8.37 (1H, s), 8.23-8.19 (2H, m), 7.98-7.93 (3H, m), 7.80 (1H, dd, J=2, 9Hz), 7.62 (1H, dd, J=2, 9Hz), 6.60-6.56 (2H, m), 4.40-4.33 (1H, m), 4.25-4.11 (2H, m), 4.04 (1H, d, J=12Hz), 3.95-3.74 (3H, m), 3.61-3.50 (1H, m), 3.38 (1H, d, J=17Hz), 2.88-2.67 (4H, m), 2.10 (3H, s), 2.03-1.86 (1H, m), 1.70-1.55 (2H, m), 1.38-1.16 (2H, m)
44	CDC13*:8.27-8.19 (2H, m), 7.47 (1H, d, J=15Hz), 7.47-7.38 (4H, m), 6.67-6.60 (2H, m), 6.59 (1H, d, J=15Hz), 4.28-4.07 (5H, m), 4.00-3.82 (3H, m), 3.73 (1H, d, J=17Hz), 3.32 (1H, dd, J=4, 13Hz), 2.89-2.75 (2H, m), 2.67 (1H, dd, J=8, 14Hz), 2.00-1.63 (3H, m), 1.40-1.20 (2H, m), 1.30 (3H, t, J=7Hz)
	CD3OD*:8.08-8.02 (2H, m), 7.69-7.63 (1H, m), 7.52-7.37 (4H, m), 7.17-7.00 (3H, m), 4.29-4.10 (2H, m), 4.09-3.75 (4H, m), 3.62-3.02 (4H, m), 2.90-2.73 (1H, m), 2.21-2.05 (1H, m), 1.95-1.73 (2H, m), 1.43-1.12 (2H, m)

APPROVED O.G. FIG.

BY CLASS SUBCLASS

ORAFISMAN 514 252

	FIG.45
Ex.No.	NMR (ppm)
EX.190.	(*:300MHz,Without asterisk:270MHz)
46	CDC13+CD30D:8.48-8.44 (1H, m), 8.14-8.00 (5H, m), 7.85 (1H, dd, J=2, 9Hz), 7.65 (1H, dd, J=2, 9Hz), 6.72 (2H, d, J=6Hz), 4.19 (1H, t, J=3Hz), 4.13-4.04 (2H, m), 3.96-3.80 (3H, m), 3.55 (1H, d, J=17Hz), 3.24 (1H, dd, J=4, 12Hz), 2.86-2.69 (2H, m), 2.62 (1H, dd, J=7, 14Hz), 1.98-1.80 (1H, m), 1.75-1.50 (2H, m), 1.35-1.10 (2H, m)
47	CDCI3:8.37-8.35 (1H, m), 8.17 (2H, d, J=6Hz), 7.98-7.92 (3H, m), 7.83-7.77 (1H, m), 7.65-7.58 (1H, m), 7.46 (0.7H, d, J=8Hz), 6.84 (0.3H, d, J=7Hz), 6.59 (2H, d, J=6Hz), 4.96-4.87 (0.3H, m), 4.18-4.00 (1.7H, m), 3.95-3.48 (5H, m), 3.19-3.05 (1H, m), 2.90-2.64 (3H, m), 2.15-1.95 (1H, m), 1.70-1.45 (2H, m), 1.35-1.10 (2H, m)
48	CDC13*:8.37-8.33 (1H, m), 8.22 (2H, d, J=6Hz), 7.97-7.90 (3H, m), 7.75 (1H, dd, J=2, 9Hz), 7.61 (1H, dd, J=2, 9Hz), 6.60 (2H, d, J=7Hz), 4.37 (1H, t, J=3Hz), 4.09 (1H, d, J=17Hz), 3.97-3.63 (8H, m), 3.63 (1H, d, J=17Hz), 3.58-3.48 (4H, m), 3.28 (1H, dd, J=3, 12Hz), 2.83-2.70 (2H, m), 2.42 (1H, dd, J=8, 14Hz), 1.95-1.60 (3H, m), 1.35-1.15 (2H, m) CDC13*:8.37-8.34 (1H, m), 8.21 (2H, d, J=7Hz), 7.97-
49	7. 89 (3H, m), 7. 75 (1H, dd, J=2, 9Hz), 7. 61 (1H, dd, J=2, 9Hz), 6. 61 (2H, d, J=7Hz), 4. 47 (1H, t, J=4Hz), 3. 97 (1H, d, J=17Hz), 3. 90-3. 73 (4H, m), 3. 76 (1H, d, J=17Hz), 3. 43 (1H, dd, J=4, 13Hz), 3. 11 (3H, s), 2. 96 (3H, s), 2. 86-2. 72 (2H, m), 2. 42 (1H, dd, J=8, 14Hz), 1. 97-1. 79 (1H, m), 1. 79-1. 58 (2H, m), 1. 30-1. 12 (2H, m)
	CDC13*:8.48-8.43 (1H, m), 8.23-8.12 (2H, m), 7.98-7.90 (3H, m), 7.82-7.74 (1H, m), 7.64-7.57 (1H, m), 6.64-6.54 (2H, m), 4.16-4.08 (1H, m), 3.98-3.67 (6H, m), 3.82 (3H, s), 3.50-3.38 (1H, m), 2.70-2.50 (4H, m), 1.85-1.70 (1H, m), 1.65-1.50 (2H, m), 1.25-1.05 (2H, m)
51	CDCl3*:8.37-8.32 (1H, m), 8.25-8.17 (2H, m), 7.97-7.90 (3H, m), 7.78-7.73 (1H, m), 7.64-7.58 (1H, m), 6.63-6.57 (2H, m), 4.45-4.40 (1H, m), 4.05 (1H, d, J=16Hz), 3.95-3.60 (10H, m), 3.32-3.24 (1H, m), 2.85-2.73 (2H, m), 2.50-2.30 (1H, m), 2.10-1.50 (5H, m), 1.40-1.20 (4H, m)
52	CDCI3*:8.36 (1H, d, J=1Hz), 8.22-8.19 (2H, m), 7.97-7.94 (3H, m), 7.82-7.78 (1H, m), 7.61 (1H, dd, J=2, 9Hz), 6.59-6.57 (2H, m), 4.25-4.16 (2H, m), 3.89-3.76 (3H, m), 3.36 (1H, d, J=17Hz), 3.30-3.22 (1H, m), 3.07 (1H, dd, J=10, 13Hz), 2.96 (1H, dd, J=4, 13Hz), 2.79-2.68 (3H, m), 2.63 (1H, dd, J=8, 14Hz), 2.05-1.87 (1H, m), 1.73-1.57 (2H, m), 1.35-1.14 (2H, m)



	FIG.46
Ex.No.	NMR (ppm)
	(*:300IVITZ,VVILHOUL ascerisk:270IVITZ)
53	CDC13*:8.36 (1H, d, J=2Hz), 8.21 (2H, dd, J=2, 5Hz), 7.97-7.93 (3H, m), 7.81 (1H, dd, J=2, 9Hz), 7.64-7.60 (1H, m), 6.58 (2H, dd, J=2, 5Hz), 4.26 (1H, d, J=10Hz), 4.21 (1H, d, J=15Hz), 3.94-3.64 (7H, m), 3.35-3.24 (2H, m), 2.91-2.52 (9H, m), 2.46-2.36 (1H, m), 2.12-1.87 (1H, m), 1.68-1.57 (2H, m), 1.37-1.14 (2H, m)
54	CDC13*:8.36 (1H, s), 8.21 (2H, d, J=6Hz), 7.96-7.93 (3H, m), 7.81 (1H, dd, J=2, 9Hz), 7.63-7.59 (1H, m), 6.58 (2H, d, J=6Hz), 4.23-4.18 (2H, m), 3.89-3.76 (3H, m), 3.29 (1H, d, J=17Hz), 3.30-3.21 (1H, m), 2.87-2.55 (5H, m), 2.38-2.24 (1H, m), 2.31 (6H, s), 2.04-1.87 (1H, m), 1.72-1.57 (2H, m), 1.34-1.16 (2H, m)
55	CDC13:8.37-8.33 (1H, m), 8.20 (2H, d, J=6Hz), 8.01-7.92 (3H, m), 7.83-7.75 (1H, m), 7.67-7.59 (1H, m), 6.57 (2H, d, J=6Hz), 6.29-6.20 (1H, m), 4.28 (1H, d, J=17Hz), 3.98 (1H, d, J=13Hz), 3.93-3.62 (5H, m), 3.48-3.14 (2H, m), 2.92 (1H, dd, J=7, 14Hz), 2.82-2.64 (3H, m), 2.06 (3H, s), 2.03-1.87 (1H, m), 1.75-1.54 (2H, m), 1.40-1.17 (2H, m)
	CDC13:8.37 (1H, s), 8.22-8.16 (2H, m), 8.02-7.90 (3H, m), 7.82-7.24 (1H, m), 7.65-7.58 (1H, m), 6.62-6.52 (2H, m), 5.60-5.40 (1H, m), 4.31 (1H, d, J=17Hz), 4.17 (1H, d, J=13Hz), 3.97-3.74 (3H, m), 3.68-3.59 (1H, m), 3.46-3.31 (3H, m), 3.05 (3H, s), 2.81-2.62 (4H, m), 2.01-1.85 (1H, m), 1.74-1.50 (2H, m), 1.38-1.16 (2H, m)
57	CDC13*:8.36 (1H, s), 8.25-8.18 (2H, m), 7.99-7.92 (3H, m), 7.86-7.78 (1H, m), 7.66-7.58 (1H, m), 6.62-6.56 (2H, m), 4.25-4.08 (2H, m), 3.93-3.62 (4H, m), 3.36-3.22 (2H, m), 2.90-2.54 (7H, m), 2.44-2.20 (3H, m), 2.10-1.10 (9H, m)
58	CDC13*:8.39 (1H, s), 8.23-8.12 (2H, m), 8.06-7.94 (3H, m), 7.80-7.64 (3H, m), 6.65-6.57 (2H, m), 4.25-4.12 (2H, m), 3.95-3.75 (5H, m), 3.50-3.40 (1H, m), 3.38 (1H, d, J=17Hz), 2.84-2.68 (4H, m), 2.05-1.89 (1H, m), 1.69-1.57 (2H, m), 1.36-1.13 (2H, m)
59	CDCI3:8.40 (1H, s), 8.25-8.18 (2H, m), 8.08-7.43 (3H, m), 7.33-7.14 (3H, m), 6.62-6.55 (2H, m), 4.42-4.33 (1H, m), 4.24-4.00 (3H, m), 3.94-3.76 (3H, m), 3.58-3.50 (1H, m), 3.38 (1H, d, J=17Hz), 2.83-2.67 (4H, m), 2.07 (3H, s), 2.01-1.87 (1H, m), 1.68-1.53 (2H, m), 1.35-1.18 (2H, m)
60	CDC13:8.34 (1H, s), 8.25-8.18 (2H, m), 7.98-7.90 (3H, m), 7.77 (1H, dd, J=2, 9Hz), 7.64-7.58 (1H, m), 6.64-6.57 (2H, m), 4.38-4.04 (5H, m), 3.96-3.75 (3H, m), 3.46 (1H, d, J=17Hz), 3.07-2.96 (1H, m), 2.88-2.68 (2H, m), 2.66-2.55 (1H, m), 1.93-1.75 (1H, m), 1.73-1.55 (2H, m), 1.32 (3H, t, J=7Hz), 1.32-1.14 (2H, m)

	FIG.47
Ex.No.	NMR (ppm) (*:300MHz,Without asterisk:270MHz)
61	CDC13:8.34 (1H, s), 8.25-8.18 (2H, m), 7.98-7.90 (3H, m), 7.77 (1H, dd, J=2, 9Hz), 7.64-7.58 (1H, m), 6.64-6.57 (2H, m), 4.38-4.04 (5H, m), 3.96-3.75 (3H, m), 3.46 (1H, d, J=17Hz), 3.07-2.96 (1H, m), 2.88-2.68
	(2H, m), 2.66-2.55 (1H, m), 1.93-1.75 (1H, m), 1.73-1.55 (2H, m), 1.32 (3H, t, J=7Hz), 1.32-1.14 (2H, m)
62	CDC13:8.36 (1H, s), 8.24-8.17 (2H, m), 7.98-7.91 (3H, m), 7.80 (1H, dd, J=2, 9Hz), 7.61 (1H, dd, J=2, 9Hz), 6.60-6.54 (2H, m), 4.17 (1H, d, J=16Hz), 4.06 (1H, d, J=12Hz), 3.92-3.75 (3H, m), 3.65-3.33 (4H, m), 3.39 (3H, s), 2.80-2.65 (4H, m), 2.03-1.85 (1H, m), 1.66-1.53 (2H, m), 1.35-1.13 (2H, m)
63	CDC13:8.36 (1H, s), 8.24-8.17 (2H, m), 7.98-7.91 (3H, m), 7.80 (1H, dd, J=2, 9Hz), 7.61 (1H, dd, J=2, 9Hz), 6.60-6.54 (2H, m), 4.17 (1H, d, J=16Hz), 4.06 (1H, d, J=12Hz), 3.92-3.75 (3H, m), 3.65-3.33 (4H, m), 3.39 (3H, s), 2.80-2.65 (4H, m), 2.03-1.85 (1H, m), 1.66-1.53 (2H, m), 1.35-1.13 (2H, m)
	DMSO-d6*:13.31 (1H, brs), 8.61 (1H, s), 8.35-8.26 (2H, m), 8.24-8.11 (3H, m), 7.92-7.84 (1H, m), 7.79-7.72 (1H, m), 7.12 (2H, d, J=7Hz), 4.30 (1H, s), 4.21-4.02 (3H, m), 3.87 (1H, d, J=16Hz), 3.76-3.66 (1H, m), 3.36 (1H, d, J=16Hz), 3.13-2.91 (3H, m), 2.66-2.54 (1H, m), 2.04-1.83 (1H, m), 1.76-1.52 (2H, m), 1.29-0.91 (2H, m)
65	CDCI3*:8.35 (1H, s), 8.26-8.19 (2H, m), 7.98-7.91 (3H, m), 7.80-7.74 (1H, m), 7.65-7.59 (1H, m), 6.61-6.56 (2H, m), 4.35-4.27 (1H, m), 4.24-4.05 (4H, m), 3.98-3.89 (1H, m), 3.86-3.76 (2H, m), 3.47 (1H, d, J=17Hz), 3.02 (1H, dd, J=3, 12Hz), 2.79-2.68 (2H, m), 2.63-2.54 (1H, m), 1.93-1.54 (5H, m), 1.33-1.17 (2H, m), 0.97 (3H, t, J=7Hz)
66	CDC13*:8.35 (1H, s), 8.26-8.19 (2H, m), 7.98-7.91 (3H, m), 7.80-7.74 (1H, m), 7.65-7.59 (1H, m), 6.61-6.56 (2H, m), 4.35-4.27 (1H, m), 4.24-4.05 (4H, m), 3.98-3.89 (1H, m), 3.86-3.76 (2H, m), 3.47 (1H, d, J=17Hz), 3.02 (1H, dd, J=3, 12Hz), 2.79-2.68 (2H, m), 2.63-2.54 (1H, m), 1.93-1.54 (5H, m), 1.33-1.17 (2H, m), 0.97 (3H, t, J=7Hz)
67	CDCI3:8.34 (1H, d, J=1Hz), 8.22 (2H, dd, J=1, 5Hz), 8.00-7.89 (3H, m), 7.81-7.74 (1H, m), 7.65-7.58 (1H, m), 6.58 (2H, dd, J=1, 5Hz), 5.20-5.08 (1H, m), 4.37-(1H, m), 4.20 (1H, d, J=17Hz), 4.03 (1H, t, J=3Hz), 3.98-3.74 (3H, m), 3.41 (1H, d, J=17Hz), 3.02-2.92 (1H, m), 2.80-2.66 (2H, m), 2.60 (1H, dd, J=8, 14Hz), 1.92-1.53 (3H, m), 1.34 (3H, d, J=7Hz), 1.32 (3H, d, J=6Hz), 1.37-1.17 (2H, m)

APPREVIOL OTG. FIG.

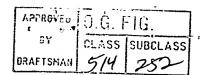
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	FIG.48
Ex.No	NMR (ppm)
	(*:300MHz,Without asterisk.270MHz)
68	CDC13:8.34 (1H, d, J=1Hz), 8.22 (2H, dd, J=1, 5Hz), 8.00-7.89 (3H, m), 7.81-7.74 (1H, m), 7.65-7.58 (1H, m), 6.58 (2H, dd, J=1, 5Hz), 5.20-5.08 (1H, m), 4.37-4.26 (1H, m), 4.20 (1H, d, J=17Hz), 4.03 (1H, t, J=3Hz), 3.98-3.74 (3H, m), 3.41 (1H, d, J=17Hz), 3.02-2.92 (1H, m), 2.80-2.66 (2H, m), 2.60 (1H, dd, J=8, 14Hz), 1.92-1.53 (3H, m), 1.34 (3H, d, J=7Hz),
	1. 32 (3H, d, J=6Hz), 1. 37-1. 17 (2H, m)
69	CDC13:8.34 (1H, s), 8.25-8.17 (2H, m), 7.98-7.89 (3H, m), 7.81-7.75 (1H, m), 7.64-7.58 (1H, m), 6:62-6.54 (2H, m), 4.36-4.27 (1H, m), 4.24-4.15 (1H, m), 3.99-3.74 (4H, m), 3.37 (1H, d, J=17Hz), 2.91 (1H, dd, J=3, 12Hz), 2.80-2.57 (3H, m), 1.88-1.48 (3H, m), 1.56 (9H, s), 1.33-1.13 (2H, m)
70	CDC13*:8.35 (1H, d, J=2Hz), 8.46-8.18 (2H, m), 7.98-7.92 (3H, m), 7.79 (1H, dd, J=2, 9Hz), 7.64-7.58 (1H, m), 6.62-6.68 (2H, m), 3.89-3.80 (2H, m), 3.74 (2H, s), 3.17 (2H, d, J=7Hz), 3.12 (2H, s), 2.80-2.67 (2H, m), 2.07-1.87 (1H, m), 1.71-1.62 (2H, m), 1.37 (6H, s), 1.36-1.18 (2H, m)
71	CDC13*:8.24 (2H, d, J=6Hz), 7.53-7.38 (5H, m), 6.70-6.57 (3H, m), 4.11 (1H, d, J=17Hz), 4.03-3.80 (4H, m), 3.70-3.46 (4H, m), 3.39 (3H, s), 3.11-3.03 (1H, m), 2.88-2.68 (3H, m), 2.12-1.90 (1H, m), 1.77-1.63 (2H, m), 1.43-1.16 (2H, m)
72	DMSO-d6*:8.22-8.14 (2H, m), 7.83 (2H, d, J=8Hz), 7.53 (2H, d, J=8Hz), 7.47-7.33 (2H, m), 7.19-7.12 (2H, m), 4.24-4.12 (2H, m), 3.55-3.25 (4H, m), 3.21-3.04 (6H, m), 2.33 (3H, s), 2.30-2.18 (2H, m), 2.10-1.78 (3H, m), 1.18-1.00 (2H, m)
73	DMSO-d6*:8.22-8.13 (2H, m), 7.84-7.77 (2H, m), 7.57-7.38 (4H, m), 7.16-7.08 (2H, m), 4.18-4.06 (2H, m), 3.77 (2H, s), 3.55-3.27 (2H, m), 3.25-2.99 (4H, m), 2.56-2.43 (2H, m), 2.29 (3H, s), 2.01-1.95 (1H, m), 1.72-1.61 (2H, m), 1.19-1.03 (2H, m)
74	DMSO-d6*:8.63-8.60 (1H, m), 8.33-8.27 (2H, m), 8.22-8.15 (3H, m), 7.90 (1H, dd, J=2, 9Hz), 7.76 (1H, dd, J=2, 9Hz), 7.12 (1H, d, J=8Hz), 4.14-4.03 (2H, m), 3.69 (2H, s), 3.46-3.28 (4H, m), 3.14 (2H, d, J=7Hz), 3.07-2.92 (2H, m), 2.29 (3H, s), 2.00-1.83 (1H, m), 1.60-1.48 (2H, m), 1.12-0.94 (2H, m)
75	CD30D*:8.50-8.45 (1H, m), 8.16-8.00 (5H, m), 7.87-7.81 (1H, m), 7.69-7.63 (1H, m), 7.07 (2H, d, J=8Hz), 4.44-4.06 (7H, m), 3.84-3.73 (1H, m), 3.45 (1H, d, J=17Hz), 3.17-3.02 (3H, m), 2.79 (1H, dd, J=7, 14Hz), 2.69 (3H, s), 2.08-1.93 (1H, m), 1.88-1.78 (1H, m), 1.74-1.64 (1H, m), 1.29 (3H, t, J=7Hz), 1.34-1.22 (2H, m)

AFPROVEE O.G. FIG. |
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	FIG.49
Ex.No.	NMR (ppm) (*:300MHz,Without asterisk:270MHz)
76	DMSO-d6*:13.16 (1H, brs), 8.61 (1H, s), 8.34-8.26 (2H, m), 8.23-8.11 (3H, m), 7.92-7.83 (1H, m), 7.80-7.72 (1H, m), 7.12 (2H, d, J=7Hz), 4.30 (1H, s), 4.22-4.03 (3H, m), 3.87 (1H, d, J=16Hz), 3.77-3.66 (1H, m), 3.37 (1H, d, J=16Hz), 3.12-2.92 (3H, m), 2.68-2.56 (1H, m), 2.31 (3H, s), 2.03-1.86 (1H, m), 1.77-1.54 (2H, m), 1.29-0.92 (2H, m)
77	CD30D*:8.43-8.37 (1H, m), 8.07-7.91 (5H, m), 7.82-7.76 (1H, m), 7.60-7.53 (1H, m), 6.98 (2H, d, J=8Hz), 4.14-3.98 (2H, m), 3.98-3.86 (2H, m), 3.79-3.59 (3H, m), 3.47-3.32 (3H, m), 3.08-2.75 (4H, m), 2.60 (3H, s), 2.09-1.94 (1H, m), 1.73-1.52 (2H, m), 1.23-1.14 (2H, m)
78	CD30D:8.51-8.47 (1H, m), 8.17-8.00 (5H, m), 7.91-7.84 (1H, m), 7.69-7.63 (1H, m), 7.07 (2H, d, J=8Hz), 4.25-3.92 (4H, m), 3.86-3.74 (1H, m), 3.68-3.41 (4H, m), 3.34 (3H, s), 3.18-2.84 (4H, m), 2.69 (3H, s), 2.20-2.01 (1H, m), 1.85-1.62 (2H, m), 1.37-1.10 (2H, m)
80	CD30D*: 7. 97-7. 93 (2H, m), 7. 60-7. 52 (2H, m), 7. 45-7. 32 (3H, m), 7. 06-6. 95 (3H, m), 4. 38-4. 32 (1H, m), 4. 28-4. 02 (4H, m), 3. 96-3. 88 (1H, m), 3. 79-3. 60 (2H, m), 3. 34-3. 17 (2H, m), 3. 14-3. 00 (2H, m), 2. 81-2. 70 (1H, m), 2. 60 (3H, s), 2. 06-1. 90 (1H, m), 1. 86-1. 64 (2H, m), 1. 31-1. 13 (5H, m)
81	CD3OD*:8.10-8.02 (2H, m), 7.69-7.61 (1H, m), 7.49-7.35 (4H, m), 7.16-7.04 (3H, m), 4.44-4.36 (1H, m), 4.31-4.14 (2H, m), 4.06-3.45 (4H, m), 3.44-3.09 (3H, m), 2.92-2.77 (1H, m), 2.69 (3H, s), 2.23-2.03 (1H, m), 1.98-1.74 (2H, m), 1.44-1.20 (2H, m)
83	CD30D: 8.55-8.49 (1H, m), 8.19-8.00 (5H, m), 7.90 (1H, dd, J=2, 9Hz), 7.06 (2H, d, J=8Hz), 4.26-4.06 (4H, m), 3.96-3.84 (2H, m), 3.52-2.64 (7H, m), 2.72 (6H, s), 2.24-2.06 (1H, m), 1.88-1.62 (2H, m), 1.46-1.12 (2H, m)
89	CD30D*:8.50-8.45 (1H, m), 8.16-8.00 (5H, m), 7.87-7.81 (1H, m), 7.69-7.63 (1H, m), 7.07 (2H, d, J=8Hz), 4.44-4.06 (7H, m), 3.84-3.73 (1H, m), 3.45 (1H, d, J=17Hz), 3.17-3.02 (3H, m), 2.79 (1H, dd, J=7, 14Hz), 2.69 (3H, s), 2.08-1.93 (1H, m), 1.88-1.78 (1H, m), 1.74-1.64 (1H, m), 1.29 (3H, t, J=7Hz), 1.34-1.22 (2H, m)
90	CD30D*:8.50-8.45 (1H, m), 8.16-8.00 (5H, m), 7.87-7.81 (1H, m), 7.69-7.63 (1H, m), 7.07 (2H, d, J=8Hz), 4.44-4.06 (7H, m), 3.84-3.73 (1H, m), 3.45 (1H, d, J=17Hz), 3.17-3.02 (3H, m), 2.79 (1H, dd, J=7, 14Hz), 4.69 (3H, s), 2.08-1.93 (1H, m), 1.88-1.78 (1H, m), 7.4-1.64 (1H, m), 1.29 (3H, t, J=7Hz), 1.34-1.22 (2H, m)





Ex.No.	NMR (ppm)
	(*:300MHz,Without asterisk:270MHz)
91	CD30D: 8.51-8.47 (1H, m), 8.17-8.00 (5H, m), 7.91-7.84
	(1H, m), 7.69-7.63 (1H, m), 7.07 (2H, d, J=8Hz),
	4. 25-3. 92 (4H, m), 3. 86-3. 74 (1H, m), 3. 68-3. 41 (4H,
	m), 3.34 (3H, s), 3.18-2.84 (4H, m), 2.69 (3H, s),
	2. 20-2. 01 (1H, m), 1. 85-1. 62 (2H, m), 1. 37-1. 10 (2H,
	m)
	CD30D: 8. 51-8. 47 (1H, m), 8. 17-8. 00 (5H, m), 7. 91-7. 84
	(1H, m), 7.69-7.63 (1H, m), 7.07 (2H, d, J=8Hz),
92	4. 25-3. 92 (4H, m), 3. 86-3. 74 (1H, m), 3. 68-3. 41 (4H,
	m), 3.34 (3H, s), 3.18-2.84 (4H, m), 2.69 (3H, s),
	2. 20-2. 01 (1H, m), 1. 85-1. 62 (2H, m), 1. 37-1. 10 (2H,
<u> </u>	m) Duco det 12 16 (14 bro)
93	DMSO-d6*:13.16 (1H, brs), 8.61 (1H, s), 8.34-8.26 (2H, m), 8.23-8.11 (3H, m), 7.92-7.83 (1H, m), 7.80-
	7. 72 (1H, m), 7. 12 (2H, d, J=7Hz), 4. 30 (1H, s),
	4. 22-4. 03 (3H, m), 3. 87 (1H, d, J=16Hz), 3. 77-3. 66
	(1H, m), 3.37 (1H, d, J=16Hz), 3.12-2.92 (3H, m),
	2. 68-2. 56 (1H, m), 2. 31 (3H, s), 2. 03-1. 86 (1H, m),
	1. 77-1. 54 (2H, m), 1. 29-0. 92 (2H, m)
	CD3OD*: 8. 48 (1H, s), 8. 17-7. 99 (5H, m), 7. 88-7. 82
	(1H, m), 7.66 (1H, dd, J=2, 9Hz), 7.06 (2H, d,
94	J=8Hz), 4.45-4.39 (1H, m), 4.30 (1H, d, J=13Hz),
	4. 23-4. 05 (5H, m), 3. 80 (1H, dd, J=8, 14Hz), 3. 46
	(1H, d, J=17Hz), 3.16-3.00 (3H, m), 2.82-2.72 (1H,
	m), 2.69 (3H, s), 2.08-1.92 (1H, m), 1.88-1.77 (1H,
	m), 1.69-1.61 (3H, m), 1.34-1.11 (2H, m), 0.97 (3H,
	t, J=7Hz)
95	CD30D*:8.48 (1H, s), 8.17-8.00 (5H, m), 7.85 (1H, dd,
	J=2, 9Hz), 7.66 (1H, dd, J=2, 9Hz), 7.03 (2H, d,
	J=8Hz), 5. 16-5. 01 (1H, m), 4. 37 (1H, t, J=3Hz), 4. 31
	(1H, d, J=13Hz), 4.22-4.05 (3H, m), 3.86-3.73 (1H,
	m), 3.39 (1H, d, J=17Hz), 3.12-2.97 (3H, m),
	2.82-2.71 (1H, m), 2.69 (3H, s), 2.07-1.90 (1H, m),
	1.87-1.76 (1H, m), 1.72-1.61 (1H, m), 1.35-1.09 (2H,
1	m) 1.32 (3H, d, J=6Hz), 1.31 (3H, d, J=6Hz)